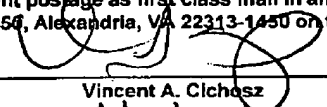


APR 11 2006

## CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

  
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Vincent A. Cichosz4/11/2006  
\_\_\_\_\_  
(Date)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/779,481  
Applicant : Scott T. Weisgerber  
Filed : 2/14/2004  
TC/A.U. : 2838  
Examiner : Robert J. Grant  
Docket No. : GP-304122

Commissioner for Patents  
Alexandria, VA 22313-1450

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**Pre-Appeal Brief Request for Review**

Sir:

In response to the Office Action dated 1/12/2006 and in conjunction with the Notice of Appeal filed herewith, please consider the following remarks.

**Remarks**

Subsequent to the Office Action issued on 1/12/2006, claims 1-9 are pending in the Application. Claims 5 and 6 are allowed. Claim 4 is objected to. Claims 1-3 and 7-9 stand rejected under 35 USC 102(e). It is the rejected claims that are the subject of this Request for Review.

Essentially, the present invention monitors battery state of charge (SOC) and if an extreme SOC – either extremely high or extremely low – is detected, makes a determination

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whether the combination of SOC and battery power flow into or out of the battery characterizes an incipient threat to battery condition. If such a threat is characterized, then a diagnostic monitoring of the SOC is invoked. The diagnostic monitoring provides for a duration of allowable operation within the extreme SOC that varies with how extreme the SOC is. The diagnostic routine essentially allows for lesser durations when the SOC is more extreme and longer duration when the SOC is not so extreme. Thus, claim 1 which is representative recites:

1. Method for diagnosing a critical state of charge condition of an energy storage system, comprising:
  - obtaining power flow and state of charge for the energy storage system;
  - determining if the combination of power flow and state of charge meet predetermined criteria;
  - if the predetermined criteria are met, indicating a critical state of charge condition if the state of charge is outside of a predetermined region of state of charge for a predetermined duration.

USPN 6,841,972 to Koo (*Koo*) forms the basis for all anticipation rejections. *Koo* essentially discloses a method for resetting a battery state of charge (actually state of health (*see col. 4, lines 35-46*)) to reduce accumulated errors. It does so with, for example with respect to Fig. 2 and discharge operation, steps to compare discharge current to a threshold (S205), determining if there is a change in the one of the battery modules having the minimum voltage (S206) and, if not, then comparing a theoretical discharge voltage (presumably of the minimum module) against the voltage of the minimum module and additional steps dependent upon the comparison.

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *W.L. Gore & Associates, v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). However, it is not enough that that the prior art reference merely disclose all of the claimed elements. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

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Here, the Office Action has failed to demonstrate that Koo discloses each element of the claims at issue and has further failed to demonstrate the allegedly disclosed elements are arranged as in the claims. The discussion set forth below is merely exemplary of errors each sufficient to support a Panel decision directing allowance of all rejected claims and is not intended to exhaust, supplant, prejudice or limit in any manner applicants' rights or arguments in any appeal to the Board of Patent Appeals and Interferences.

First, the Office Actions have asserted that applicants' claimed limitation "determining if the combination of power flow and state of charge meet predetermined criteria" is met by Koo's disclosure at column 5, lines 46-53. (see e.g. Office Action mailed 1/12/2006, p. 2, para. 2). Koo's disclosure at column 5, lines 46-53 relates to a comparison of a theoretical discharge voltage (based on internal resistance and no load voltage) and a minimum discharge voltage (determined from the one of a plurality of modules having the lowest voltage) (see col. 5, lines 27-29, *The battery is comprised of a set of modules, and the module whose voltage is the lowest is designated as the minimum voltage module*). Clearly, neither Koo's theoretical discharge voltage nor Koo's minimum discharge voltage corresponds to either applicants' power flow or state of charge. And, in any case, the limitation to which the subject portion of Koo is applied relates to a "combination of power flow and state of charge." There is no such combination taught by Koo. Furthermore, applicants' limitation requires "determining if the combination of power flow and state of charge meet predetermined criteria" and the Office Action merely points to a comparison of a theoretical discharge voltage and a minimum discharge voltage – not a comparison of applicants' combination of power flow and state of charge against a criteria.

The Office Action mailed 1/12/2006 response to applicants' arguments does nothing to advance the basis for rejection. In fact, additional confusion is introduced. Therein, the response equates applicants' power flow to Koo's discharging current (see p. 4, para. 3) and in the same paragraph at page 5 equates applicants' power flow with discharge voltage. And also therein the response indicates that applicants' claimed limitation "determining if the combination of power flow and state of charge meet predetermined criteria" is met by the following assertion.

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“Koo does in fact disclose the “power flow” (discharge voltage), and then from the values that it is monitoring at (209) the SOC is know (sic), and if the theoretical discharge voltage remains larger then (sic) the minimum discharge voltage for a predetermined period of time (i.e., predetermined criteria), then a warning is set (Column 5, lines 54-60).”

Applicants’ aren’t even sure how to respond to this passage; however, it appears that the passage is merely engaging in some form of hindsight to pick among aspects of Koo and put them together alleging they make up applicants’ claim limitation. Apart from the failure of elemental equivalency demonstrated in the paragraph above and even if such piecemeal reconstruction were allowable, it is clear that the elements are not arranged as in the applicants’ claims and so differ therefrom as to fail anticipating.

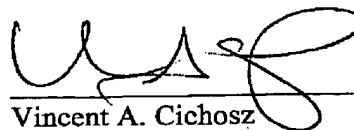
Second, the Office Actions have asserted that applicants’ claimed limitation “if the predetermined criteria are met, indicating a critical state of charge condition if the state of charge is outside of a predetermined region of state of charge for a predetermined duration” is met by Koo’s disclosure at column 5, lines 54-60. (see e.g. Office Action mailed 1/12/2006, p. 2, para. 2). Koo’s disclosure at column 5, lines 54-60 relates to a simple timer that is active when a theoretical discharge voltage exceeds voltage of the minimum voltage module (see e.g. Fig. 2, S209). Apart from the demonstrated shortcoming above (i.e. the voltage comparison of Koo is not the comparison of applicants’ combination of power flow and state of charge against a criteria), the simple timer and result of Koo is not equivalent to applicants’ claimed limitation of “indicating a critical state of charge condition if the state of charge is outside of a predetermined region of state of charge for a predetermined duration.” Koo discloses no such reliance upon a state of charge being outside of a predetermined region.

Applicants respectfully submit that the errors demonstrated herein, and other errors of similar scope and nature not detailed herein, are of a notorious nature appropriate for corrective action by this Panel. Therefore, applicants respectfully request that this Panel withdraw all anticipation rejections and direct the examiner to allow all claims to proceed to issue.

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Any fees associated with this response may be charged to General Motors Deposit  
Account No. 07-0960.

Respectfully submitted,



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